

# **The Energy Factbook:**

## **A Resource For South Carolina**



**S.C. Energy Office**  
1201 Main Street, Suite 1010  
Columbia, SC 29201

**(803) 737-8030 ✎ 1-800-851-8899**  
**FAX: (803) 737-9846**

**[www.energy.sc.gov](http://www.energy.sc.gov)**

**S.C. DHEC's Office of Solid Waste  
Reduction and Recycling**  
2600 Bull Street  
Columbia, SC 29201

**1-800-768-7348 ✎ FAX: (803) 896-4001**

**[www.scdhec.gov/recycle](http://www.scdhec.gov/recycle)**

***Printed on Recycled Paper***

This publication was prepared with the support of the U.S. Department of Energy, Grant No. DE-FG-44-00R410766, State Energy Program, administered by the S.C. Energy Office. Any opinions, findings, conclusions and recommendations expressed herein are those of the authors and do not necessarily reflect the views of DOE.

**PRINTED SEPTEMBER 2003** - Total Printing Cost: \$4,137 - Total Number of Documents Printed: 5,000 - Cost Per Unit: \$0.83

# Table of Contents

Chapter 1: An Introduction To Energy .....	3
Energy Measurement Equivalents .....	6
Chapter 2: The Energy Basics .....	7
Chapter 3: South Carolina's Energy Situation .....	11
Chapter 4: The Fossil Fuels: Petroleum, Natural Gas and Coal .....	13
Chapter 5: Nuclear Energy .....	19
Chapter 6: Electricity .....	25
Chapter 7: Solar Energy and Renewable Resources: Sun, Wind, Wood and Other Biofuels .....	31
Chapter 8: Alternative Transportation Fuels .....	37
Chapter 9: Conservation and Efficiency .....	41
An Energy Challenge .....	46
Additional Information .....	47

## Education Resources

*Provided by the South Carolina Energy Office and  
the S.C. Department of Health and Environmental Control*

- ✦ **“Action for a cleaner tomorrow: A South Carolina Environmental Curriculum Supplement:”** This kindergarten through 12th grade curriculum supplement includes 12 energy lessons that provide not only a global and national perspective on energy, but South Carolina-specific information as well. Teachers can receive a printed copy or CD-ROM of “Action” following a mandatory three-hour workshop. Both the curriculum and workshop are free.
- ✦ **E2IQ Kit:** This energy-only kit is tailored to the grade level of the requesting teacher. Along with energy posters, lessons, games and promotional items, the E2IQ Kit contains information on how to set up a school-wide Energy Patrol (elementary), participate in energy activities (sixth grade) and information on submitting science fair projects to the S.C. Junior Academy of Science (ninth and 10<sup>th</sup> grade).
- ✦ **Energy Glossary**
- ✦ **“Science Fair Project Guidebook: A Resource for Students and Teachers”** is a hands-on guidebook that covers the basics from how to choose a science fair topic to the final exhibit. The guidebook, applicable for students of all ages and their parents, also contains science fair projects on energy. For your free copy of “The Science Fair Project Guidebook,” call the S.C. Energy Office at **1-800-851-8899** or **(803) 737-8035**. The guidebook also is available on-line at [www.energy.sc.gov/k-12educationpage.htm](http://www.energy.sc.gov/k-12educationpage.htm).
- ✦ **Recycling Resource Center**
- ✦ **National Energy Education Development Project:** The National Energy Education Development Project, NEED, is a nationally recognized energy education program dedicated to developing innovative educational materials and training programs for teachers and students.
- ✦ **AND MUCH, MUCH MORE!**

*Call 1-800-768-7348 or 1-800-851-8899 for details.*



## Web Sites of Interest

*Listed below are the Web site sponsors, titles and Internet addresses for various energy-related Web sites.*

**Alliance to Save Energy**, Multidisciplinary Lesson Plans  
[www.ase.org/educators/index.htm](http://www.ase.org/educators/index.htm)

**America Recycles Day**, [www.americarecyclesday.org](http://www.americarecyclesday.org)

**Energy Center of Wisconsin**, Energy Ed On-line  
[www.uwsp.edu/cnr/wcee/keep](http://www.uwsp.edu/cnr/wcee/keep)

**Energy Efficiency and Renewable Energy**,  
Energy Education Page  
<http://www.eere.energy.gov/education/>

**Energy Efficiency and Renewable Energy Network (EREN)**, Kids' Stuff  
<http://www.eren.doe.gov/kids>

**Energy Information Association**, Kid's Page  
<http://www.eia.doe.gov/kids/>

**U.S. Environmental Protection Agency**, Explorers' Club  
[www.epa.gov/kids](http://www.epa.gov/kids)

**National Energy Education Development Project (NEED)**  
[www.need.org](http://www.need.org)

**Newton's Apple**, Electric Cars  
[www.ktca.org/newtons/10/electricar.html](http://www.ktca.org/newtons/10/electricar.html)

**Newton's Apple**, Electricity  
[www.ktca.org/newtons/12/electric.html](http://www.ktca.org/newtons/12/electric.html)

**Newton's Apple**, Ethanol  
[www.ktca.org/newtons/14/ethanol12.html](http://www.ktca.org/newtons/14/ethanol12.html)

**Newton's Apple**, Sun  
[www.ktca.org/newtons/12/sun.html](http://www.ktca.org/newtons/12/sun.html)

**S.C. Department of Health and Environmental Control**  
[www.scdhec.gov/recycle](http://www.scdhec.gov/recycle)

**S.C. Energy Office**  
[www.energy.sc.gov](http://www.energy.sc.gov)

**Tennessee Energy Education Network**, TEEN On-line  
<http://www.tnenergy.com/>

**U.S. Department of Energy**, Kidszone  
<http://www.energy.gov/kidz/kidzone.html>